REMARKS

In response to the Final Office Action mailed July 29, 2003, the Applicant respectfully requests reconsideration. To further the prosecution of this application, amendments have been made in the claims as illustrated above. Claims 38-57 were previously pending in this application. By this amendment, Applicant cancels claim 49 without prejudice or disclaimer, amends claims 38-42, 44 and 47-56 and adds claims 58 and 59. As a result, claims 38-48 and 50-59 are pending for examination, of which claims 38, 52 and 59 are independent.

1. Claims 38-48, 50, 51 and 58 Patentably Distinguish Over Bruckert

Claim 38 stands rejected (Office Action, Sections 4 and 9) under 35 U.S.C. §102(b) as purportedly being anticipated by U.S. Patent No. 4,742,451 (Bruckert). Applicant respectfully traverses.

1.1 Discussion of Bruckert

Bruckert teaches a digital processing system that processes prefetched instructions including a conditional branch instruction (Abstract). When the fetch unit fetches a conditional branch instruction, it may continue to prefetch "branch not taken" instructions using the instruction fetch portion (Abstract). More particularly, the fetch unit is divided into two sections, or "ports", one of which fetches instructions from the memory (Col. 2, lines 49-51; Fig 2A). The second section fetches operands from the memory (Col. 2, lines 51-52; Fig 2A).

In response to **decoding** a conditional branch instruction, the fetch unit determines the address of the "branch taken" instruction stream, and uses the operand fetch portion to begin prefetching instruction words from the "branch taken" instruction stream (Col. 7, lines 28-33; Fig 2A; emphasis added).

1.2 Claim 38 is Not Anticipated By Bruckert

Claim 38 has been amended to clarify the subject matter to which Applicant is believed

entitled to patent protection, as shown above. Claim 38 as amended recites:

> A computer system comprising:
> storage circuitry for holding a plurality of instructions at respective storage locations, the plurality of instructions including a first string of instructions including a set branch instruction indicating a target location within the storage circuitry at which a new instruction, not included in the first string, is stored, the first string further including a subsequent instruction that is subsequent in the first string to the set branch instruction;
> instruction fetch circuitry to fetch instructions from said storage circuitry, the instruction fetch circuitry including a first instruction fetcher to fetch instructions, including the subsequent instruction, from the first string, and including a second instruction fetcher; and
> execution circuitry to execute fetched instructions, including executing the set branch instruction,
> wherein the second instruction fetcher is operative, **responsive to execution of said set branch instruction**, to fetch the new instruction from the location indicated by the set branch instruction, in parallel to the first instruction fetcher fetching the subsequent instruction.

Claim 38 is not anticipated by Bruckert because Bruckert fails to disclose a computer system comprising, *inter alia*, an instruction fetcher operative, *responsive to execution of said set branch instruction*, to fetch a new instruction from a location indicated by a set branch instruction, in parallel to another instruction fetcher fetching a subsequent instruction. In contrast, as described above, Bruckert discloses prefetching instruction words from the "branch taken" instruction stream *in response to decoding a conditional branch instruction*.

Therefore, for at least these reasons, claim 38 is not anticipated by Bruckert. Accordingly, Applicant respectfully requests that the rejection of claim 38 under §102(b) as being anticipated by Bruckert be withdrawn.

Claims 39-48, 50, 51 and 58, which each depend directly or indirectly from claim 38, are patentable over the art of record for at least the same reasons as claim 38. Accordingly, Applicant respectfully requests that the rejections of claims 39-48, 50 and 51 be withdrawn.

2. Claims 52-57 Patentably Distinguish Over Bruckert

Claim 52 stands rejected (Office Action, Section 4 and 9) under 35 U.S.C. §102(b) as purportedly being anticipated by Bruckert. Applicant respectfully traverses.

Claim 52 has been amended to clarify the subject matter to which Applicant is believed entitled to patent protection, as shown above.

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Claim 52 is not anticipated by Bruckert because Bruckert fails to disclose a method of operating a computer storage circuitry holding a plurality of instructions at respective storage locations, said plurality of instructions being arranged in instructions strings including a first instruction string that includes a set branch instruction indicating a target location within the storage circuitry at which a new instruction, not included the first string, is stored, the first string further including a subsequent instruction that is subsequent in the first instruction string to the set branch instruction, the method comprising: fetching the subsequent instruction from said storage circuitry; executing said set branch instruction; and *in response to executing said set branch instruction*, fetching the new instruction from said storage circuitry in parallel to fetching the subsequent instruction, as recited in claim 52. In contrast, as described above, Bruckert discloses prefetching instruction words from the "branch taken" instruction stream *in response to decoding a conditional branch instruction*.

Therefore, for at least these reasons, claim 52 is not anticipated by Bruckert. Accordingly, Applicant respectfully requests that the rejection of claim 52 under §102(b) as being anticipated by Bruckert be withdrawn. Claims 53-57, which each depend directly or indirectly from claim 52, are patentable over the art of record for at least the same reasons as claim 52. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

3. Claim 59 Patentably Distinguishes Over the Art of Record

Claim 59 patentably distinguishes over the art of record because the art of record, including Bruckert, fails to disclose or suggest a computer system comprising: storage circuitry for holding a plurality of instructions at respective storage locations, the plurality of instructions including a first string of instructions including a set branch instruction indicating a target location within the storage circuitry at which a new instruction, not included in the first string, is stored, the first string further including a subsequent instruction that is subsequent in the first string to the set branch instruction; execution circuitry to execute fetched instructions, including the set branch instruction; and means for fetching the subsequent instruction and the new instruction from the storage circuitry in parallel *in response to execution of the set branch instruction*, as recited in claim 59.

Therefore, Applicant respectfully submits that claim 59 is in condition for allowance.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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